

Application Deadline: May 7, 2003**Notification of Award: May 21, 2003**

The 5th Food & Nutrition Summer Institute, **“From Science to Action: Preparing the Nation for Health and Security,”** will be held July 19 – 24, 2003 at the Beltsville Human Nutrition Research Center in Beltsville, MD. A strong emphasis for the Summer Institute is placed on experiential learning, incorporating theory and application. This year’s theme recognizes the need for diverse communities to be healthy and secure in times of peace, crisis or emergency. The program also highlights a unique collaboration between the Summer Institute and the US Army Research Lab, which is interested in nutrition and health for military and civilian population groups.

The 2003 program will include 3 project options, each with a component that requires a commitment to carrying out the project during the 2003-04 academic year. Projects I and II are student-focused. Project III is for faculty.

_____ **I. MREs and Emergency Preparedness: Nutritional Implications.** *Natural disasters, such as major snowstorms or hurricanes, and recent elevated national security alerts remind us of the importance of preparing for the unexpected. The purpose of this project will be to investigate MREs (meals ready to eat), what they are, and their use in a military environment and how they might be designed to better meet emergency preparedness nutrition needs.*

_____ **II. Nutrition, Physical Activity and Diabetes Management: Investigating Two Models**

Students who apply for this project must select the Human Model or Animal Model.

_____ **a. Animal Model** *(Requires animal care facilities and committee on campus). More animal models are needed to study diabetes to get a better understanding of the impact of nutrition and exercise on the development and amelioration of the disease. One such animal model is the sand rat, a wild rodent native to the sub-Saharan desert and northern Africa. Upon eating a low fiber, high energy and electrolyte poor diet in captivity, the sand rat develops clinical symptoms consistent with diabetes mellitus, which makes it a good model to study the disease. The purpose of this project will be to introduce and apply principles of the use of research animals in the study of human diseases.*

_____ **b. Human Model.** *Exercise is one of the key components in the maintenance of physical fitness, the reversal of conditions like obesity, as well as the prevention of musculoskeletal injuries and complications from diseases like diabetes. The purpose of this project will be to introduce and apply the principles of human factors to the design of components of an exercise & fitness program. Human factors research involves the reduction or prevention of errors in the use of hardware, software, and training programs. For this project, background data for refining current measures of physical fitness will be explored and current barriers to adequate fitness self-monitoring will be assessed. This knowledge will help in designing a fitness-monitoring device based on human-factors principles, which will be useful for military physical fitness training and diabetes management in military and civilian populations.*

_____ **III. Nutrition, Health and Security: Faculty Report(s).** *The purpose of this project will be to formulate a strategy for documenting the achievements of projects I & II. With Summer Institute facilitators, faculty will help monitor and advise students during the academic year on their projects. Faculty will write and submit report(s) and manuscript(s) on research findings based on student projects.*

Application Instructions:

Applications must be submitted by mail, fax or e-mail (with MS Word or Word Perfect attached documents). **Limited funding to assist with travel, participation in Summer Institute, and work on project (for students) during the academic year will be available.** Applications received after May 7, 2003 will not be considered for stipends.

Other Registration Information:

Hotel: Rooms have been reserved for the *USDA Food and Nutrition Summer Institute* at the Holiday Inn, 10000 Baltimore Ave., College Park, MD. This block of rooms will be held until June 19, 2003. After that date, room reservations will be subject to space and availability. For reservations, please call 1-800-465-4329 or 301-345-6700. **Each participant must make his or her own hotel reservation.** The hotel room rate is \$109 + 10% tax. Funding support will include hotel stay.

Registration Fee: \$100 per person. Fee includes meals and materials during Summer Institute. Checks, made payable to Systems III, must accompany the application form. Questions should be directed to Systems III at 301-464-0003, 301-464-9077 (Fax) or newsom@bigplanet.com.

Student Participant:

Last Name _____ First Name _____ Initial _____

University _____ SS# _____

Major (Students) _____ GPA _____

MailingAddress _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-Mail _____

Signature of Faculty Project Advisor _____

Faculty Project Advisor: Phone _____ E-mail _____

Faculty Participant:

Position/Title _____ University _____ SS# _____

MailingAddress _____

City _____ **State** _____ Zip _____

Phone _____ Fax _____

E-Mail _____

Registration Deadline: May 7, 2003

Return application and fee to: Systems III, P.O. Box 367, Bowie, MD 20719